

Notice of Allowability

Application No.

09/758,963

Examiner

Dung (Michael) T Nguyen

Applicant(s)

YOSHIDA ET AL.

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 03/03/04.
2. ☒ The allowed claim(s) is/are 31-35 and 39-80.
3. ☒ The drawings filed on 10 January 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Allowable Subject Matter

Claims 31-35 and 39-80 are allowed.

The following is an examiner's statement of reasons for allowance: The examiner has reviewed the prior art in light of applicant's claimed invention and finds that the claims define over the prior art. The prior art does not disclose or suggest inter alia the limitations of a fabrication method for a semiconductor laser apparatus to be operated at a desired optical output power level from a source of electric drive power, the desired optical output power level being greater than 50 mW, the semiconductor laser apparatus having a semiconductor laminated structure formed on a substrate, the laminated structure including a lower cladding layer, an upper cladding layer, an active layer disposed between the lower and upper cladding layer, a front facet to output the laser beam, a back facet, and a cavity length between the front and back facets, the active layer being configured to generate light such that the apparatus provides optical output power at the front facet in response to the source of electric drive power, the fabrication method comprising: acquiring a relationship of the electric drive power as a function of the cavity length and the optical output power level of the semiconductor laser apparatus, the relationship including cavity lengths greater than 1000 um and

optical output power levels greater than 50 mW; determining a value of the cavity length from the acquired relationship such that the electric drive power is vicinal to a minimum for the desired optical output power level and such that the value of cavity length is greater than 1000 μm , the desired optical power level being greater than 50 mW; forming a semiconductor laminated structure on a substrate, the step including the steps of forming a lower cladding layer over the substrate, forming an active layer over the lower cladding layer, and forming an upper cladding layer over the active layer; and forming the semiconductor laser apparatus from the semiconductor laminated structure such that it has a front facet, a back facet, and a cavity length between said facets, the cavity length having the value of the cavity length determined by the cavity length determining step.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Communication Information

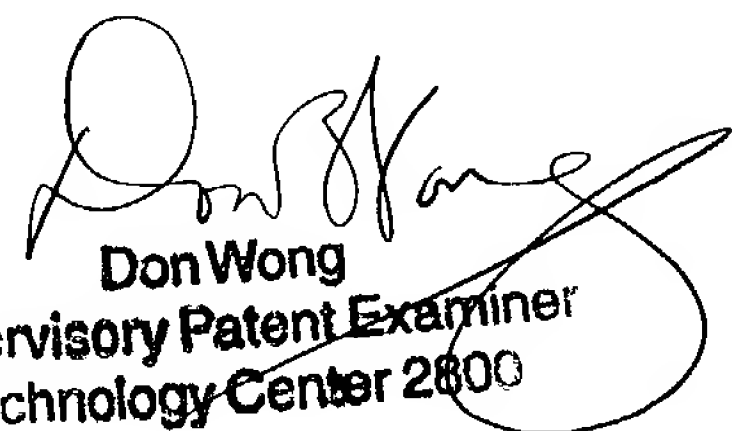
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone

number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 306-5511 for regular communications and (703) 306-5511 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Nguyen (Michael) Dung


Don Wong
Supervisory Patent Examiner
Technology Center 2800